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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/509,789	03/30/2000	HANS-JOSEF STERZEL	48428	9729

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WASHINGTON, DC 20036

EXAMINER
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DOVE, TRACY MAE

ART UNIT	PAPER NUMBER
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1745

15

DATE MAILED: 04/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/509,789

Applicant(s)

STERZEL ET AL.

Examiner

Tracy Dove

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21,22 and 25-27 is/are pending in the application.
- 4a) Of the above claim(s) 21,22,25 and 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This Office Action is in response to the communication filed on 3/3/03. Applicant's arguments have been considered, but are not persuasive. Claims 21, 22 and 25-27 are pending. Claims 1-20, 23 and 24 are canceled. This Action is made **FINAL**, as necessitated by amendment.

#### ***Election/Restrictions***

Note Applicant has elected the species represented by formula IIIa (claim 26). Applicant confirmed this in a telephone interview with Herb Keil on 4/24/02.

Newly amended claim 21 (along with dependent claim 22) and newly submitted claims 25 and 27 are directed to an invention that is distinct from the invention originally elected for the following reasons: the elected species, formula IIIa, has been deleted from claim 21.

Since applicant has received an action on the merits for the originally elected invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 21, 22, 25 and 27 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

#### ***Claim Objections***

Claim 26 is objected to because of the following informalities: the formula of claim 26 contains a typographical error. The bond between the oxygen and the phosphorus should be a double bond instead of a single bond. This was confirmed by Applicant in a telephone interview with Herbert Keil on 4/8/03. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

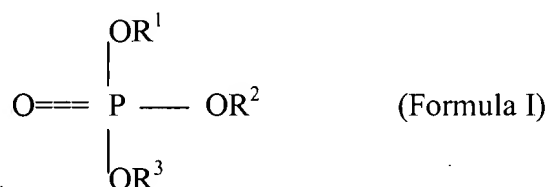
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claim 26 is rejected under 35 U.S.C. 102(e) as being anticipated by Narang et al., US 5,830,600.

Narang teaches nonflammable/self-extinguishing electrolytes for batteries. Novel fire-retardant electrolyte compositions comprise a lithium salt dissolved in a fire-retardant solvent selected from phosphates, phospholanes, cyclophosphazenes, silanes, fluorinated carbonates, fluorinated polyethers and mixtures thereof. See abstract. Narang teaches batteries comprising an anode, a cathode and a fire-retardant electrolyte composition including a lithium salt dissolved in a solvent, wherein the solvent is a phosphate having the structure as shown in Formula I (see col. 3, lines 63-col. 4, lines 10):



wherein R1, R2 and R3 may be C1-C6 alkyl terminally substituted with 0-3 halogen atoms and containing 0-3 ether linkages. The structure of instant claim 26 is encompassed by Formula I of Narang. Narang specifically disclosed the compound recited by instant claim 26 in col. 7, lines 57-64. This section of Narang teaches that tris-(methoxyethyl) phosphate (formula of instant

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claim) may be used as the phosphate for the electrolyte solvent. Furthermore, Narang teaches a specific example using tri-(methoxyethyl)phosphate (TMEP) as the solvent and  $\text{LiPF}_6$  as the electrolyte salt of the electrolyte of a lithium cell (Table 2). The battery of Narang may be a  $\text{Li}_x\text{C}_6/\text{electrolyte}/\text{LiCoO}_2$  type battery. Narang teaches preferred lithium salts include compounds of the formula  $\text{Li-A}$ , wherein A is an anion which may be  $\text{BF}_4$  or  $\text{PF}_6$  (col. 10, lines 17-27).

Thus the claim is anticipated.

### ***Response to Arguments***

Applicant's arguments filed 3/3/03 have been fully considered but they are not persuasive.

Applicant argues that for one to arrive at applicant's claims, one must select one of many solvents disclosed by Narang and combine it with one of many electrolyte salts disclosed by Narang.

Examiner disagrees with Applicant's interpretation of the Narang reference. In col. 3, lines 63-col. 4, lines 14 Narang teaches the solvent of the instant invention. Furthermore, col. 7, lines 57-64 and Table 2 gives specific examples of electrolytes using TMEP (formula of instant claim). Thus, one is not selecting from "many solvents", as asserted by Applicant.

Regarding the teaching of the lithium salt by Narang, Narang is not limited to the examples or preferred teachings. Note that Narang teaches in col. 10, lines 19-27 that "preferred lithium salts include compounds of the formula  $\text{Li-A}$ , wherein A is an anion which may be... $\text{BF}_4$ ... $\text{PF}_6$ ...and mixtures thereof". Both  $\text{LiBF}_4$  and  $\text{LiPF}_6$  are common lithium salts for lithium secondary batteries. See Linden, Handbook of Batteries, page 36.15. Note the list of

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twelve salts (col. 10, lines 21-22) disclosed by Narang is not considered to be selecting from "many electrolyte salts" as asserted by Applicant.


***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tracy Dove whose telephone number is (703) 308-8821. The Examiner may normally be reached Monday-Thursday (9:00 AM-7:30 PM). My supervisor is Pat Ryan, who can be reached at (703) 308-2383. The Art Unit receptionist can be reached at (703) 308-0661 and the official fax numbers are 703-872-9310 (after non-final) and 703-872-9311 (after final).

April 8, 2003

  
**Patrick Ryan**  
**Supervisory Patent Examiner**  
**Technology Center 1700**